Small Business Innovation Research/Small Business Tech Transfer

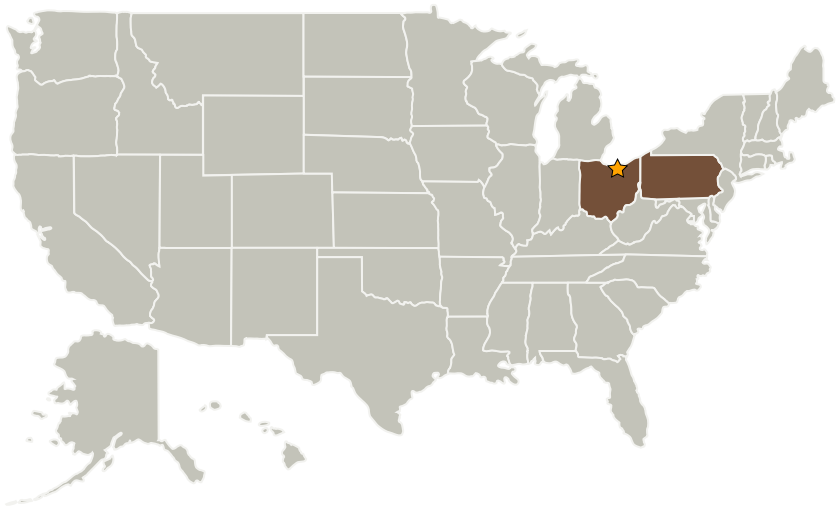
Intermediate Temperature Fluids for Heat Pipes and Loop Heat Pipes, Phase I

Completed Technology Project (2006 - 2006)

Project Introduction

This Small Business Innovation Research Phase I project will develop heat pipe and loop heat pipe (LHP) working fluids for what is known as the intermediate temperature range, from roughly 500 K to 700 K. Currently, there are no working fluids in this range that can be used in NASA applications, due in part to unknown physical properties and insufficient life test data. The overall objective of the proposed Phase I and Phase II programs is to validate one or more fluids for use in the intermediate temperature range. This will include life tests, determination of the physical property data required to design heat pipes and LHPs in this temperature range, and the design, fabrication, and testing of suitable heat pipes and/or LHPs.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Glenn Research Center(GRC)	Lead Organization	NASA Center	Cleveland, Ohio
Advanced Cooling Technologies, Inc.	Supporting Organization	Industry	Lancaster, Pennsylvania

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Glenn Research Center (GRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations	
Ohio	Pennsylvania

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX03 Aerospace Power and Energy Storage
  - TX03.1 Power Generation and Energy Conversion
    - TX03.1.2 Heat Sources